

# **OPEN LETTER ON NUCLEAR ARMS DEVELOPMENT IN SOUTH KOREA**

FOREIGN LANGUAGES PUBLISHING HOUSE  
PYONGYANG, KOREA  
1992

The Foreign Languages Publishing House translates and publishes in various foreign languages the "Open Letter on Nuclear Arms Development in South Korea" issued by the Central Committee of the National Democratic Front of South Korea in Seoul.

The Joint Declaration on Denuclearization was adopted and ratified by the south and north of Korea and its implementation is under discussion. But south Korea is promoting nuclear arms development, in violation of the joint declaration.

In south Korea vast manpower resources, including nuclear technicians, and funds have been employed in the development of nuclear weapons, including the extraction of nuclear materials, the production of nuclear bombs and the manufacture of the means of delivering nuclear weapons.

The nuclear arms development in south Korea, along with the US nuclear bases there, is the cause of nuclear danger on the Korean peninsula.

But this dreadful situation is still being veiled in the fuss about “north Korea’s nuclear development”. This is a cause of great apprehension around the world.

The Central Committee of the National Democratic Front of South Korea, in an endeavor to secure denuclearization and peace on the Korean peninsula, discloses the truth of the anti-national, anti-human development of nuclear weapons by the south Korean government.

## **1. Policy of nuclear arms development and its enforcement**

Nuclear arms development is a key policy conducted by the successive south Korean military regimes in order to achieve “unification by prevailing over communist north Korea”.

The development of nuclear weapons in south Korea, that has been supported by the intensified military fascist rule, was adopted as a policy in the late 1960s, launched in the 1970s and promoted in the 1980s and into the 1990s.

The debate on nuclear weapons development began among the top leaders of the military fascist regime in 1965 and was adopted as a secret policy of the government in 1969 when former US President Richard Nixon announced the “Guam Doctrine”.

Park Chung-hee who had usurped power through a military coup d’etat, promoted the development of nuclear weapons, and revealed his willingness to employ every available means to develop nuclear weapons “for national security”.

The “Long-term Plan for Research into and the Development of Atomic Energy” passed at the 172nd session of the Korea Atomic Energy Commission in May 1969 reflected Park Chung-hee’s desire. The plan noted, “The technical and economic examination of the nuclear fuel cycle will be finished during the Third Five-Year (1972-1976) Economic Development Plan, and reprocessing facilities will be built during the Fourth Five-Year (1977-1981) Economic Development Plan”.

In late 1970 Park Chung-hee had his secret Weapons Development Committee adopt the “Nuclear Arms Development Plan” as government policy.

Having drawn up an overall blueprint for nuclear arms development in the 1960s, the government began in the 1970s to invest vast secret funds into implementing its nuclear policy on a full scale in the name of “independent national defence”.

The essence and ultimate goal of so-called “independent national defence” was to develop nuclear weapons for use against north Korea.

Park Chung-hee formed a working-level group for nuclear weapons development. Park Chung-hee was the chief of the group with senior Presidential secretary in charge of heavy chemical and defence industries Oh Won-chul as his advisor, and Minister of Science and Technology Choi Hyong-sop, Vice-President Chu Jae-yang who was in charge of special affairs at the Korea Atomic Energy Research Institute (KAERI)—it was listed as the Korea

Advanced Energy Research Institute at the IAEA—and department chief of the Taedok branch of the KAERI Kim Chol as the core members. He established research institutes to complete the system for development of nuclear weapons.

The Park regime sent over 20 scientists to Europe for a year long training in nuclear development. In addition it dispatched Chu Jae-yang to France and other nuclear powers to discover the processes of nuclear arms development. South Korea followed the example of a country which developed nuclear bombs by using Canadian NRX and simultaneously promoted the extraction of nuclear materials, the production of nuclear bombs and the development of the means of their delivery.

After the south Korea-US joint military exercise Team Spirit began in 1976, the Park Chung-hee regime further accelerated the development of and research into nuclear weapons. Team Spirit is in fact a nuclear war drill.

Thus, south Korea laid down basic foundations for producing nuclear weapons on an experimental basis, making a bridgehead for nuclear weapons development in the late 1970s. At that time, Park Chung-hee's team proposed the secret construction of a nuclear weapons factory, to which Park replied, "It is almost finished, so it is no concern of yours. When nuclear weapons are being produced, I will give up the Presidency and work at Yongnam University." The then Minister of Science and Technology Choi Hyong-sop confessed, "If President Park gives the order, we can make nuclear bombs within a year or two." Park Chung-hee's daughter Park Keun-hye said that in those days around the October 26, 1979, incident in which Park Chung-hee was shot to death, the development of missiles had already proved successful and the completion of nuclear weapons was at hand, with the required materials having been obtained.

The development of nuclear weapons in south Korea was not halted with Park Chung-hee's death. In the 1980s the Chun Doo-

hwan regime promoted it in a variety of secret ways under the cloak of the “domestic development of nuclear technology.”

In May 1981, six months after Chun Doo-hwan took power, there was a secret meeting at Chong Wa Dae to resume the temporarily-suspended development of nuclear weapons. A high-ranking nuclear expert demanding anonymity recalled that at the meeting it was decided to complete the nuclear fuel cycle despite the many difficulties. He added that it was also agreed that the academic world, laboratories, enterprises and other related bodies should accumulate knowledge of the nuclear fuel cycle in close combination, and it would be more effective if the matter was kept quiet. So, atomic energy institutes were combined into a so-called advanced energy institute and all the processes of nuclear arms development were promoted behind the curtain of the “technical development of atomic energy” for “industrial purposes”. The Chun Doo-hwan regime then developed it onto the industrialized stage.

The “domestic development of nuclear technology” by the Chun regime meant obtaining reprocessing facilities for military purposes and accumulating technology for nuclear arms development under the cloak of the “establishment of self-supporting foundations for atomic energy development.” A report titled “The Control of Spent Nuclear Fuel” presented by the Chun Doo-hwan regime to the south Korea-US atomic energy commission in 1982 hinted that a 250-ton-capacity reprocessing facility would start operation in 1992, increasing to 500 tons in 1995 and 1,000 tons in 2000. By opening a post-irradiation test facility equipped with all reprocessing processes in 1987, south Korea established a basic foundation for the extraction of plutonium and the production of nuclear arms.

Since the late 1980s the Roh Tae-woo regime has speeded up nuclear development, while making a great fuss about the “nuclear development” by north Korea.

A confidential report prepared by the south Korean Joint Chiefs of Staff for the Defence Minister on August 18, 1989,

dwelled upon the necessity to speed up nuclear armament and presented detailed measures for completing nuclear weapons development. Former Defence Minister Lee Jong-gu, who was denounced by the people for his advocacy of a “forestalling attack on a north Korean reactor” in April 1991, called on Roh Tae-woo prior to his visit to Washington in June that year. He told Roh that south Korea should have a nuclear option, emphasizing the need for its own nuclear arms, to which Roh Tae-woo replied, “I have my own idea”. What Roh Tae-woo meant was building up the fuss about the north Korean nuclear issue in conformity with Washington’s desire, and, behind the scenes, gradually justifying and promoting the development of nuclear weapons by south Korea.

The Roh Tae-woo regime declared that there were no nuclear weapons in south Korea. In fact, however, it is hastening nuclear development, contacting the former Soviet Union concerning nuclear cooperation and the sale of reprocessing technology, enriched uranium and plutonium, in the name of the “northern policy”.

The south Korean government’s nuclear policy is aimed at the development of nuclear weapons, not at the peaceful use of atomic energy, and is the keypoint of the “security policy” of the successive military fascist regimes. The development of nuclear weapons in south Korea has arrived at an undisguised nuclear armament policy in the 1990s through the policy-shaping stage in the 1960s, experimental development in the 1970s and industrial development in the 1980s.

## **2. The danger of nuclear arms development**

The actual potential to develop nuclear weapons and its danger are manifested in the ability of nuclear researchers and techni-

cians, the accumulation of nuclear materials and nuclear facilities.

South Korea, through the persistent acceleration of nuclear development, has already surpassed the danger level in all three aspects.

### **15,000 nuclear technicians**

The nuclear technicians in south Korea numbered 15,000, including 1,500 doctors, in 1989. The number was close to the 20,000 in France and the 16,000 in Britain, nuclear powers, and surpassed that in Japan, a latent nuclear power.

What is important is that these technicians are working for the development of nuclear weapons, not for the peaceful use of atomic energy.

They have all been enlisted for the development of nuclear weapons, and they have gone abroad to study military science. Having laid down the policy of nuclear weapons development, the dictatorial regime in the early 1970s formed a group headed by Minister of Science and Technology Choi Hyong-sop, who was concurrently the first Director of the Korea Institute of Science and Technology.

The team visited many foreign countries to invite top technical manpower to south Korea. The government brought to south Korea dozens of nuclear experts from the United States, including Dr. Lee Hwi-soh from the US Fermi National Laboratory, who was called Benjamin Lee by American nuclear physicists, Chu Jae-yang who was engaged in research into nuclear fuel having graduated in chemistry from the Massachusetts Institute of Technology (MIT), Kim Byong-gu who since 1972, had been engaged in the Viking Project for a Mars probe at the Jet Propulsion Laboratories under the US National Aeronautic and Space Administration, and Kim Chol who had served at the Natick Army Institute in Massachusetts. The nuclear research institutes and bases in



south Korea are led by them, specialists in their respective fields of nuclear weapons development.

The Atomic Energy Research Institute is in charge of nuclear reprocessing and the development of reactors; the Agency for Defence Development (ADD) under the Defence Ministry, for the design of nuclear weapons and the development of missiles, and the Nuclear Development Complex, for the manufacture of nuclear weapons. These are the main organizations in the development of nuclear weapons in south Korea.

The main task of the KAERI was to solve the scientific and technical problems related to the production of enriched uranium-235 and plutonium-239. The staff of this institute number 2,298, and 939 of them are researchers and technicians. The number is near to the 2,460 of the Japan Atomic Energy Research Institute. Director Han Pil-soon of the institute came to the post in 1984 through the chief professor of the physics department at the Air Force Academy, the 13th project chief of ADD in 1970 and the president of the Taedok Engineering Center of the KAERI in 1982. He is regarded as a person with strong desire to use atomic energy for the strategic purpose.

The ADD, established in 1970, has taken charge of the development of strategic weapons, including their means of delivery, the introduction of foreign weapons and assessment of weapons. In December 1991 research and development into conventional weapons were transferred to civil defence industrial bodies, so that it could take charge of the development of strategic weapons, their technology and weapons systems, that is, the development of middle- and long-range missiles, the computerization of control systems and research into communications and information systems. Director Kim Hak-ock of the ADD is a reserve lieutenant general who has for many years managed the development of weapons ranging from the K-2 rifle to the Hyonmu missile, as well as the assessment of imported weapons.

The Korean Nuclear Development Complex, established in 1976, is engaged in producing nuclear weapons. The complex, founded by Park Chung-hee with nuclear experts, aims at developing the technology of nuclear bomb production. For the sake of secrecy, the research results were not presented even to senior officials but directly to Park Chung-hee when he visited it once or twice every month. The heads of the complex were Kim Kang-jin, who had graduated in the quantitative analysis of plutonium at Belgonucleaire in Belgium and Park Hyon-soo and Park Hon-hwi who had specialized in reprocessing methods and research into radioactive substances at the Grenoble Atomic Energy Institute in France.

So, the nuclear technicians in south Korea have been recruited for the development of nuclear weapons.

### **Reserve of spent fuel for 1,500 nuclear bombs**

Washington and Seoul are making a fuss about the “danger of nuclear development” by the north, taking issue over a 5,000 kw-class reactor which was built at the end of 1987 for peaceful purposes in Yongbyon in north Korea. According to south Korean nuclear experts, however, it would take nearly ten years to secure enough plutonium for a Hiroshima-type atomic bomb with the spent fuel from the Yongbyon reactor. Furthermore, north Korea does not yet have a reprocessing facility.

The assertion of Seoul and Washington that north Korea can produce nuclear weapons is quite nonsensical.

But south Korea has in operation reactors Nos. 1, 2, 3 and 4 in Kori, a pressurized heavy water reactor in Wolsong, reactors Nos. 1 and 2 in Uljin and Nos. 1 and 2 in Yonggwang, nine in all, as well as three research reactors. Their total generating capacity amounts to 7,220,000 kws. These reactors extract spent fuel containing 480-540 kilograms of plutonium

every year. 1,140 tons high-level spent fuel had been stockpiled in underwater storage as of 1990, and it is estimated that from it ten tons of plutonium can be extracted in 1992. This amount is enough to produce 1,500 of Nagasaki-type nuclear bombs of 20 kt-class.

It is particularly serious that the spent fuel is being reprocessed for military purposes.

These dreadful nuclear bombs are made of plutonium-239 extracted from spent fuel the south Korean dictatorial regime is now stockpiling.

### **Taedok Nuclear Arms Development Complex**

Taedok County in Chungchongnam-do Province is a pivot linking the atomic power plants and munitions companies in the coastal areas of Kyongsangnam-do, Kyongsangbuk-do and Chul-lanam-do Provinces.

Taedok is a comprehensive nuclear arms development area where there are based the KAERI, the Agency for Defence Development (ADD), the Korean Nuclear Fuel Company (KNFC) and many other nuclear research institutes and facilities.

The Korea Multipurpose Research Reactor (K-MRR) in Taedok Nuclear Development Complex is geared to military purposes.

The K-MRR in Taedok, the construction of which was started in 1987, is a 30,000 kw atomic reactor for the development of nuclear arms, built jointly with Atomic Energy of Canada Ltd. (AECL) at a cost of 80 billion Korean *won* (about 100 million US dollars). It is now processing spent fuel with a high plutonium content. It is designed to use both natural and enriched uranium, and it is more efficient than the Canadian NRX which was once used to produce atomic bombs.

The post-irradiation test facility at the Taedok Nuclear Development Complex is in fact a semi-reprocessing factory. The most important reprocessing technology is to press into hotcell or shield, transport, dismantle, cut, analyze, smelt and separate highly-radioactive spent fuel. The post-irradiation test facility is equipped with all the processes necessary for this. This post-irradiation test facility, which began experimental operation at the end of the 1970s and full operation in 1987, has been expanded into a large one with an additional investment of 40 billion *won* (about 50 million dollars).

The K-MRR and the post-irradiation test facility are an inter-related plutonium-reprocessing system. A nuclear fuel factory was built in Taedok in September, 1989, and in neighbouring Kongju County a new nuclear fuel factory is to be built by 1996 at a cost of 111.2 billion *won* (about 139 million dollars) on a site of 297,000 square meters.

Today Taedok has been converted into a large nuclear complex similar to the Rokasho-mura nuclear development complex in Japan. The Taedok Nuclear Development Complex is a pivotal nuclear arms development base in south Korea.

Referring to the possibility of nuclear arms development the south Korean monthly *Wolgan Choson* in April, 1990, wrote in an article, "The Nuclear Game on the Korean Peninsula", "If ordered, the nuclear-related industry, experts and facilities in various parts of south Korea can be mobilized promptly to start the development of nuclear arms. The multi-purpose research reactor can be reconstructed to reprocess plutonium, the operational technology of the post-irradiation test facility can be used for the construction and operation of reprocessing reactors, and the design technology of the nuclear fuel and atomic reactor can be applied in the design and manufacture of fission bombs."

Nuclear arms development in south Korea is now being pro-

moted on the basis of practical possibilities added to government policy. Herein lies its greatest danger.

### **3. The development of nuclear arms and its gravity**

The production of nuclear weapons in south Korea is now under way, and this represents more than a potential danger.

In the system of nuclear arms development uranium enrichment and plutonium extraction, the design, manufacture and testing of nuclear bombs and the development of the means of delivering them are all linked together.

#### **The production of nuclear explosives**

The enrichment of uranium and the extraction of plutonium are major processes for producing nuclear explosives. In the nuclear fuel cycle of reprocessing spent fuel through refinement, conversion, enrichment, reconversion, and the irradiation of uranium, enriching and reprocessing processes are vital for the development of nuclear weapons. Nuclear development and research in south Korea are focused on the enriching and reprocessing processes.

The south Korean government has made every effort to obtain enriched uranium.

Enriched from 0.7 percent by mass to 3-4 percent by mass, uranium can be used as nuclear fuel, and to over 80-90 percent by mass, as a nuclear explosive. Behind the veil of the "domestic production of nuclear fuel", the south Korean government has developed supplementary facilities and the technology that are necessary for uranium enrichment and begun to concentrate its investment on laser-enriching methods and centrifugal processes. From 1984 on, the south Korean government promoted basic research for obtaining enriched uranium on a full scale and thus developed the technology of separating the atom with a

laser in 1988. According to the October 1991 issue of the monthly *Wolgan Choson*, the south Korean government is promoting the south Korea-Russia joint development of the laser enrichment method, while focusing its efforts on studies into a variety of equipment for the full activity, continued repetition and complete resolution of the laser. South Korean nuclear researchers succeeded in producing a centrifugal separator of 60,000 revolutions per minute to separate enriched uranium. The facts prove that the south Korean government's moves to obtain enriched uranium for military purposes have entered the stage of production through technical development.

South Korea has completed the system it needs for the extraction of plutonium, and it is now in full operation, plutonium-239 is being extracted by a CANDU heavy water reactor in Wolsong county, and the K-MRR and post-irradiation test facilities in Taedok County. The south Korean government has illegally produced a large quantity of plutonium by covering observation cameras and other tricks.

Yet dissatisfied with this, the south Korean nuclear maniacs are working to build reprocessing facilities to extract more plutonium. In the early 1970s they obtained technical data related to the construction of reprocessing facilities through south Korea-France joint cooperation, and the suspended construction of its reprocessing factories seems to have been resumed based on joint development with other nuclear powers. An official of the Korean Nuclear Fuel Company hinted at an IAEA meeting in October, 1989, that his government intended to reprocess spent fuel under the cloak of extracting plutonium for a pressurized light water reactor. He added, "From now on, the plutonium-reprocessing facilities will be developed for test production at an early date, and they will become fully operational between 2007 and 2016".

The south Korean government is importing enriched uranium and plutonium for nuclear weapons, in addition to what it pro-

duces domestically. Some enriched uranium and plutonium were once confiscated in Italy and Switzerland after international criticism, as it was believed to have come from the former Soviet Union. Such enriched uranium and plutonium have been shipped secretly into south Korea, too, so it has been confirmed.

South Korea has 30-40 kgs of enriched uranium and plutonium, enough to produce 3-5 bombs of Hiroshima-type atomic bombs.

Russia has asked foreign countries to buy 100 tons of plutonium and 500 tons of enriched uranium removed from her tactical nuclear weapons. This was exciting for the south Korean government that is eager to manufacture nuclear weapons. The south Korean daily *Chungang Ilbo* on November 10, 1991, reported, "Russia has found a free market, that is, a nuclear market. Moscow is the best market for purchasing breeder reactors, enriched uranium and other materials necessary in the production of nuclear arms". According to foreign press reports, the south Korean government is actively dealing with Russia in the purchase of enriched uranium and plutonium. The enriched uranium is traded at 120,000 dollars per gram.

This development casts a dark shadow on the denuclearization of the Korean peninsula.

### **The development of nuclear weapons**

Having accumulated a large quantity of nuclear explosives, south Korea has practically developed nuclear arms.

The promotion of an atomic reactor design in the 1980s was geared to obtaining technical data on atomic bombs from abroad.

The KAERI has accelerated the design of Reactors Nos. 3 and 4 in Yonggwang County in cooperation with US Combustion Engineering (CE) so as to acquire nuclear weapons technology, and blueprints were sent to Korea Heavy Industries

Co. on the Changwon Industrial Estate for the manufacture of the designed equipment. In the course of this joint project that will be finished within this year, the KAERI is to receive over 4,300 blueprints, items of patented data, some 200 pages of confidential computer data and codes which form the core technology for the manufacture of nuclear bombs.

The nuclear development team has bought through a third country, a high-speed camera capable of filming for one millionth of a second that can film the moment of explosion in an inner blast test, and produced the initiating explosive HMX for itself for the inner blast test.

Supplementary technical problems in the production of nuclear arms are now under study at Seoul College of Engineering and other universities and colleges. For security purposes, the government keeps selected sections of campuses under strict guard. Various parts necessary for the production of nuclear arms are manufactured by munitions companies, including Korea Heavy Industries Co. and some civilian companies in secret.

Despite the secrecy that surrounds research and production, all the aspects of the process have been brought to light.

### **The production of the means of nuclear delivery**

The means of nuclear delivery in south Korea are diverse. South Korea developed 150 km-range guided missiles in 1978 and 180 km- and 240 km-range guided missiles in the 1980s. Now the development of medium- and long-range missiles are being speeded up. The south Korean army has a large number of nuclear bomb-capable F-15s and F-16s, 155mm howitzers and 8-inch nuclear capable guns, plus Honest John and other missiles.

Thus a wide variety of nuclear delivery systems is under completion, and they are continuously being operated in regular exercises.



Nuclear armament in south Korea is the harsh reality, not a possibility for tomorrow. The Institute of Strategic Studies of the US National War College noted in a report, "The World in 2010" that south Korea could possess 500 nuclear weapons by the year 2010.

The south Korean government is speeding up nuclear armament behind the curtain of a fuss about the nuclear issue in north Korea. But the world cannot overlook the danger of south Korean nuclear armament.

South Korea, a large nuclear arsenal with more than 1,700 nuclear arms, is now being converted into a terrible nuclear arsenal owing to the anti-peace, nuclear policy of Washington and the Seoul colonial regime.

We cannot sit back while nuclear weapons mushroom under the US nuclear umbrella.

We south Korean people who yearn to live in a nuclear-free, peaceful and reunified land will unanimously join the anti-nuclear drive against the fascist Seoul regime's moves for nuclear armament, and the struggle to clear the US nuclear bases and arms out of this land.

The National Democratic Front of South Korea hopes all the peace-loving people of the world stand side by side with the south Korean people in their struggle against Seoul's moves for nuclear armament.

Printed in the Democratic People's  
Republic of Korea

**No. 206159**